US Investor Index

How do you compare against the average US investor?

slides.com/qplum/us-investor-index

What we will cover today

Importance of a benchmark

Wrong benchmarks that we use today

What would be the right benchmark?

Data used in construction of the index

Current risk and allocation of US investors

Creation of qplum's US investor index

Comparing US investor index to hedge funds

Trading strategy on investor behavior

What we will <u>not</u> cover today

Stocks better than bonds?

Humans vs AI

Recommendations about specific stocks

Bitcoin!

Importance of the right benchmark

- Helps us compare (fairly)

- Helps us decide what to do
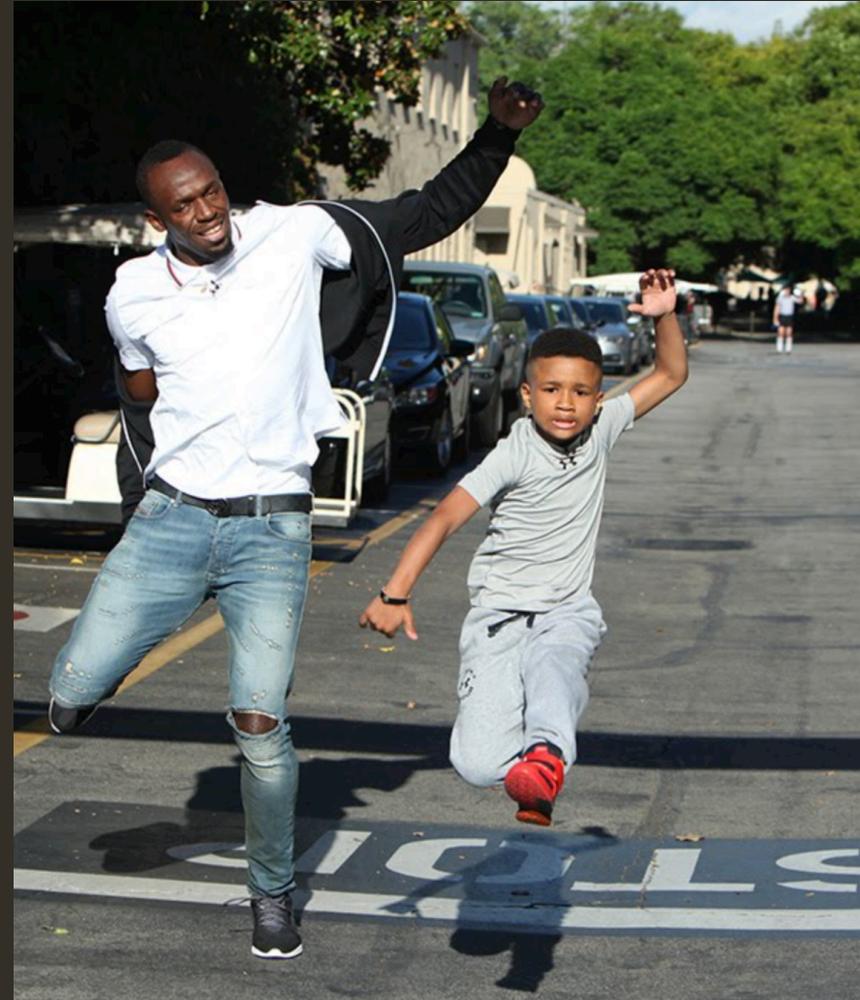
Incorrect benchmarks

BAD BENCHMARKING

The S&P 500 is not an appropriate performance benchmark for a portfolio with multiple–asset classes.
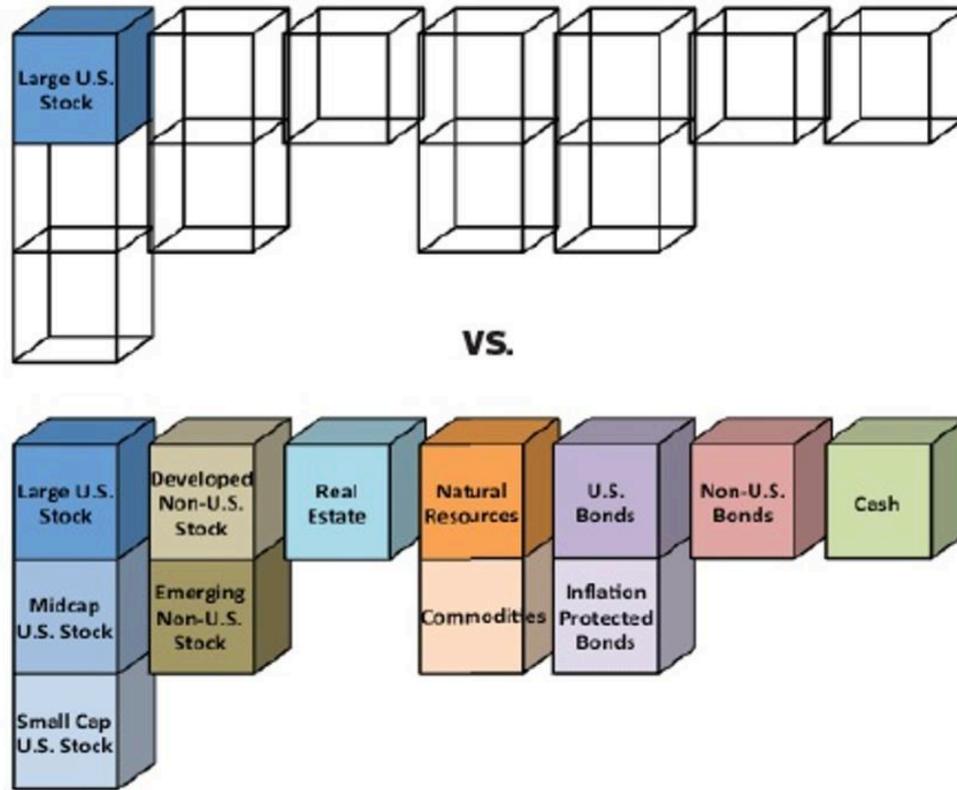
Large U.S. Stock

VS.

Large U.S. Stock | Developed Non-U.S. Stock | Real Estate | Natural Resources | U.S. Bonds | Non-U.S. Bonds | Cash

Midcap U.S. Stock | Emerging Non-U.S. Stock | | Commodities | Inflation Protected Bonds

Small Cap U.S. Stock

... compare the returns for your current portfolio to the benchmark for the class of investments you're considering - Finra.org

Data Used in construction of US Investor Index

Data:

- Balance sheet allocations to each sector
- Inflow / outflow in each sector

Sources:

Federal Reserve US Household balance sheet

BLS data on retirement allocations

Example of data available

**B.101** Balance Sheet of Households and Nonprofit Organizations (1)

Billions of dollars; amounts outstanding end of period, not seasonally adjusted

			2014	2015	2016	2016 Q1	2016 Q2	2016 Q3	2016 Q4	2017 Q1	2017 Q2
1	FL152000005	**Assets**	**97941.2**	**101270.7**	**107204.9**	**101789.2**	**102755.3**	**105118.2**	**107204.9**	**109571.3**	**111415.0**
2	LM152010005	Nonfinancial assets	28575.8	30327.4	32036.2	30647.1	31035.4	31583.1	32036.2	32527.5	33134.8
3	LM155035005	Real estate	23070.6	24623.5	26166.4	24885.3	25235.0	25751.4	26166.4	26551.1	27115.1
4	LM155035015	Households (2,3)	20301.5	21594.5	22933.9	21932.6	22225.4	22551.0	22933.9	23363.7	23822.5
5	LM165035005	Nonprofit organizations	2769.1	3029.1	3232.5	2952.7	3009.5	3200.4	3232.5	3187.4	3292.6
6	LM165015205	Equipment (nonprofits) (4)	317.9	328.1	337.5	330.8	333.1	335.9	337.5	340.1	343.0
7	LM165013765	Intellectual property products (nonprofits) (4)	132.5	139.3	144.1	140.1	141.3	142.3	144.1	146.4	148.6
8	LM155111005	Consumer durable goods (4)	5054.6	5236.5	5388.1	5291.0	5326.1	5353.6	5388.1	5489.9	5528.2
9	FL154090005	Financial assets	69365.5	70943.3	75168.8	71142.1	71719.9	73535.0	75168.8	77043.7	78280.1
10	LM153091003	Foreign deposits	45.6	31.2	25.6	32.0	30.6	30.3	25.6	28.7	30.8
11	FL153020005	Checkable deposits and currency	1093.6	1148.2	1068.0	1152.7	1089.5	1041.3	1068.0	1145.2	1157.8
12	FL153030005	Time and savings deposits	7890.9	8386.3	9082.7	8493.4	8571.8	8916.4	9082.7	9223.3	9145.6
13	FL153034005	Money market fund shares	1117.1	1074.5	1025.5	1055.5	1016.9	995.4	1025.5	998.4	977.4
14	FL154022005	Debt securities	3848.2	4457.4	4344.7	4173.4	3691.7	3695.2	4344.7	4220.6	3946.4
15	FL153061105	Treasury securities	802.3	1178.0	1434.5	1115.6	1059.3	1175.1	1434.5	1404.9	1428.9
16	FL153061705	Agency- and GSE-backed securities	265.1	500.1	398.4	460.6	368.6	306.1	398.4	413.5	412.7
17	FL153062005	Municipal securities	1695.1	1643.6	1680.8	1636.0	1611.3	1604.0	1680.8	1646.4	1626.6
18	FL153063005	Corporate and foreign bonds	1085.7	1135.7	831.0	961.2	652.3	610.1	831.0	755.8	478.2
19	FL154023005	Loans	1063.1	1002.7	997.8	1043.6	1045.1	1020.0	997.8	1012.1	1010.2
20	FL153069005	Other loans and advances (5)	893.2	842.6	841.6	884.4	886.3	862.3	841.6	857.9	856.3
21	FL153065005	Mortgages	122.3	115.1	114.4	114.8	115.1	114.5	114.4	113.8	115.0
22	FL163066223	Consumer credit (student loans) (6)	47.6	44.9	41.9	44.4	43.8	43.2	41.9	40.3	38.9
23	LM153064105	Corporate equities (2)	14314.5	13824.7	15358.1	13843.9	14203.3	14808.6	15358.1	16170.5	16953.3
24	LM153064205	Mutual fund shares	6835.2	6725.1	7218.6	6779.4	6951.5	7235.2	7218.6	7667.7	7969.8
25	FL163070005	Trade receivables (6)	225.8	235.3	244.9	237.7	240.1	242.5	244.9	247.3	249.7
26	FL153040005	Life insurance reserves	1282.8	1309.1	1340.0	1317.2	1337.2	1348.5	1340.0	1359.2	1365.4
27	FL153050005	Pension entitlements (7)	20623.7	20981.4	21910.6	21174.6	21426.0	21757.0	21910.6	22330.5	22614.3
28	LM152090205	Equity in noncorporate business (8)	10107.6	10815.9	11547.5	10877.2	11139.5	11457.5	11547.5	11635.2	11849.1
29	FL153090005	Miscellaneous assets	917.4	951.6	1004.7	961.6	976.7	987.2	1004.7	1005.1	1010.4
30	FL154190005	**Liabilities**	**14306.1**	**14575.1**	**15033.4**	**14578.2**	**14752.7**	**14890.0**	**15033.4**	**15073.2**	**15219.4**
31	FL163162003	Debt securities (municipal securities) (6)	228.0	219.9	216.3	220.5	220.4	218.2	216.3	216.4	219.2
32	FL154123005	Loans	13726.5	13998.1	14456.5	13998.5	14171.3	14310.9	14456.5	14494.0	14636.0
33	FL153165105	Home mortgages (9)	9455.0	9585.0	9793.2	9589.3	9652.5	9731.3	9793.2	9838.0	9902.0
34	FL153166000	Consumer credit	3317.4	3417.2	3645.2	3423.7	3490.7	3575.0	3645.2	3641.8	3697.1
35	FL153168005	Depository institution loans n.e.c.	211.9	322.8	347.7	334.1	364.1	315.6	347.7	338.1	342.8
36	FL153169005	Other loans and advances	513.8	437.3	427.1	413.6	424.5	447.6	427.1	430.9	447.1
37	FL163165505	Commercial mortgages (6)	228.3	235.8	243.3	237.7	239.6	241.5	243.3	245.2	247.1
38	FL163170005	Trade payables (6)	321.8	325.5	329.2	326.4	327.3	328.3	329.2	330.1	331.1
39	FL543077073	Deferred and unpaid life insurance premiums	29.9	31.6	31.3	32.8	33.6	32.7	31.3	32.7	33.1
40	FL152090005	**Net worth**	**83635.1**	**86695.7**	**92171.6**	**87211.0**	**88002.6**	**90228.1**	**92171.6**	**94498.0**	**96195.6**
		Memo:									
41	FL893131573	Assets held in IRAs (10)	7292.0	7329.0	7850.0	7400.0	7527.0	7767.0	7850.0	8169.0	ND
42	FL154023205	Assets held in 529 college plans (10)	247.9	253.2	275.1	257.9	266.2	275.1	275.1	289.4	299.2
43	LM154023223	College savings plans	223.9	229.8	251.4	234.1	242.0	251.2	251.4	265.6	275.4
44	FL154023213	Prepaid tuition plans	24.0	23.4	23.7	23.8	24.2	23.9	23.7	23.8	23.8

Asset allocation of US investors
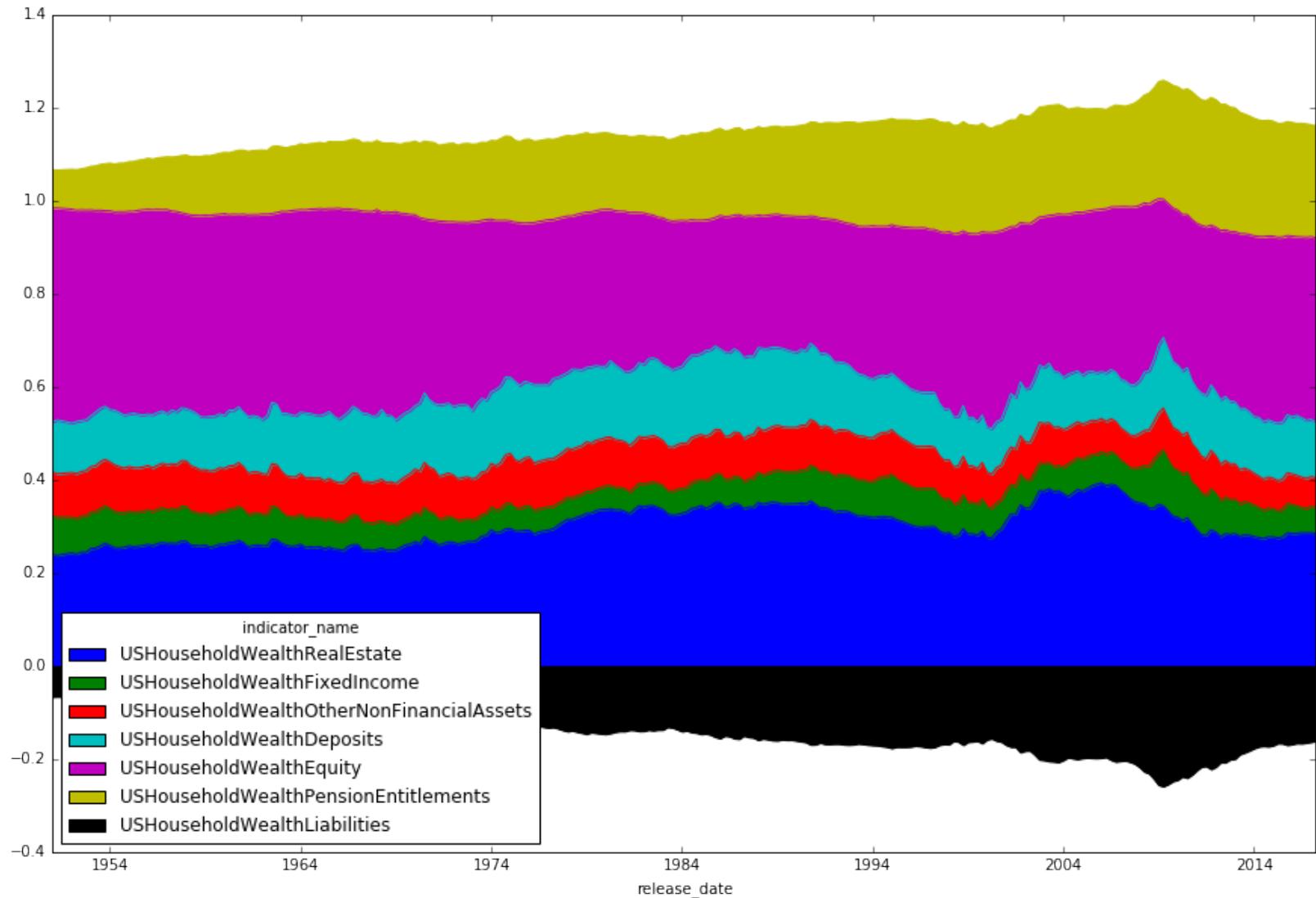
In depth look into allocation changes
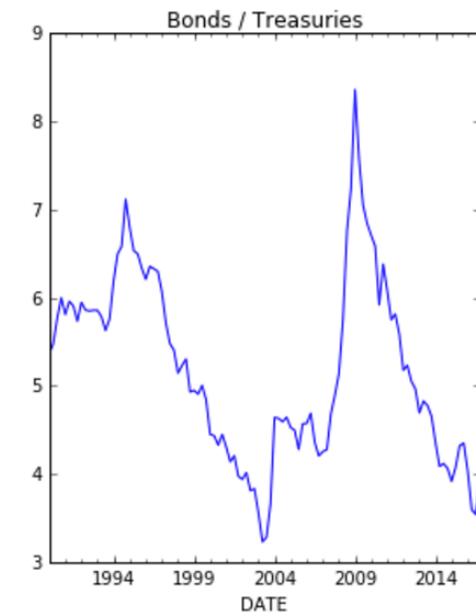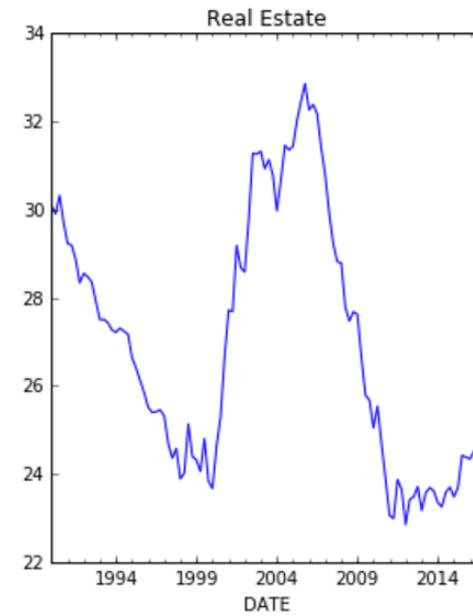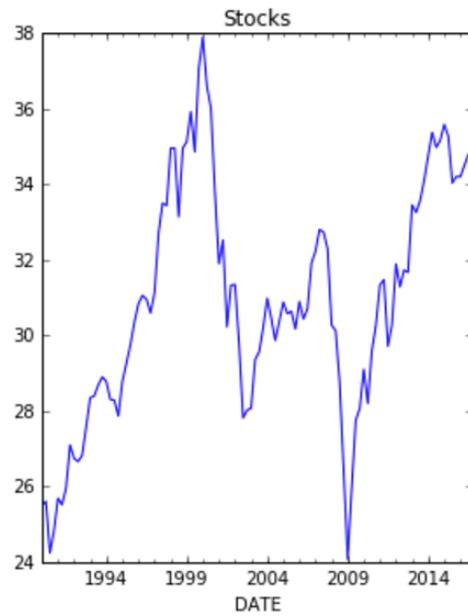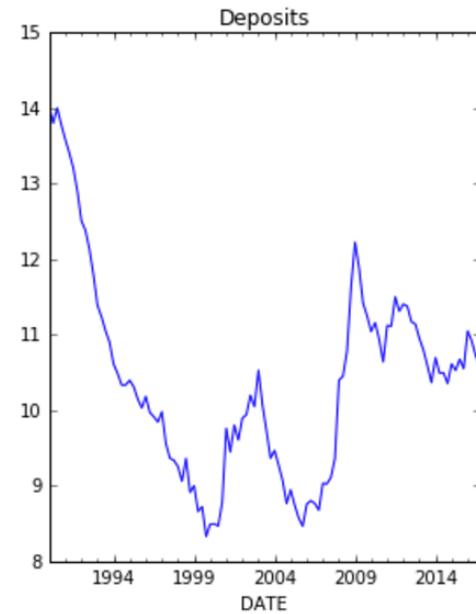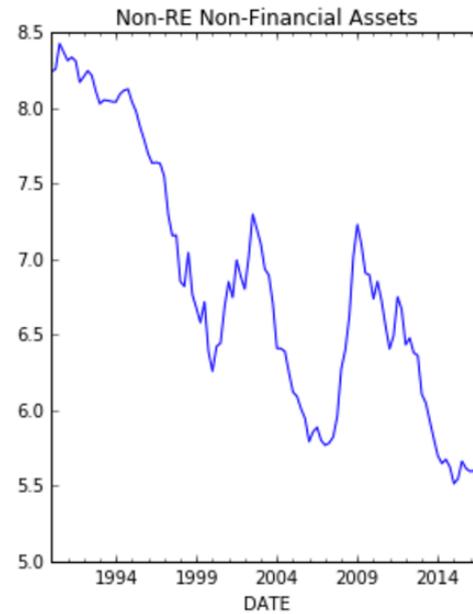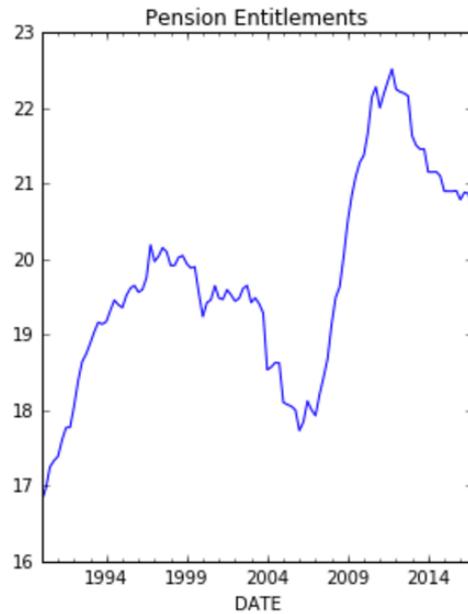
# Questions so far?

Creation of qplum's US investor index

On every update to the balance sheet of US investors published by the Federal Reserve:

1. Update the current allocation
2. Compute the realized returns of the previous quarter
3. Adjust the previous estimate of the period

Performance of qplum's US investor index
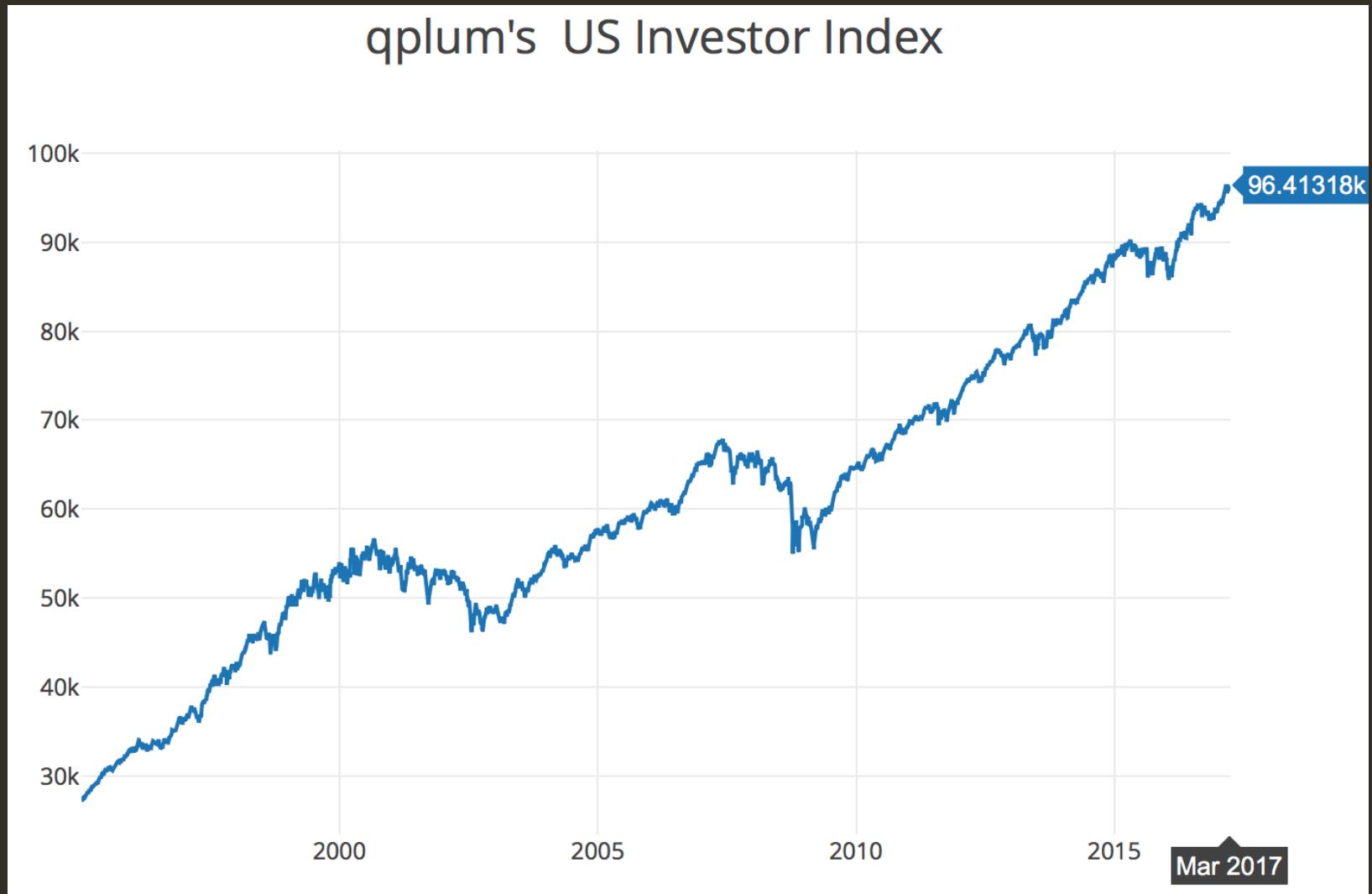
Investors panic at 5% drop in wealth

Maximum drawdown in U.S. household wealth

— drawdown level

Time / Drawdown since last peak in U.S. household wealth

0.00%

-5.00%

-10.00%

-15.00%

-20.00%

1/1/1960   1/1/1970   1/1/1980   1/1/1990   1/1/2000   1/1/2010
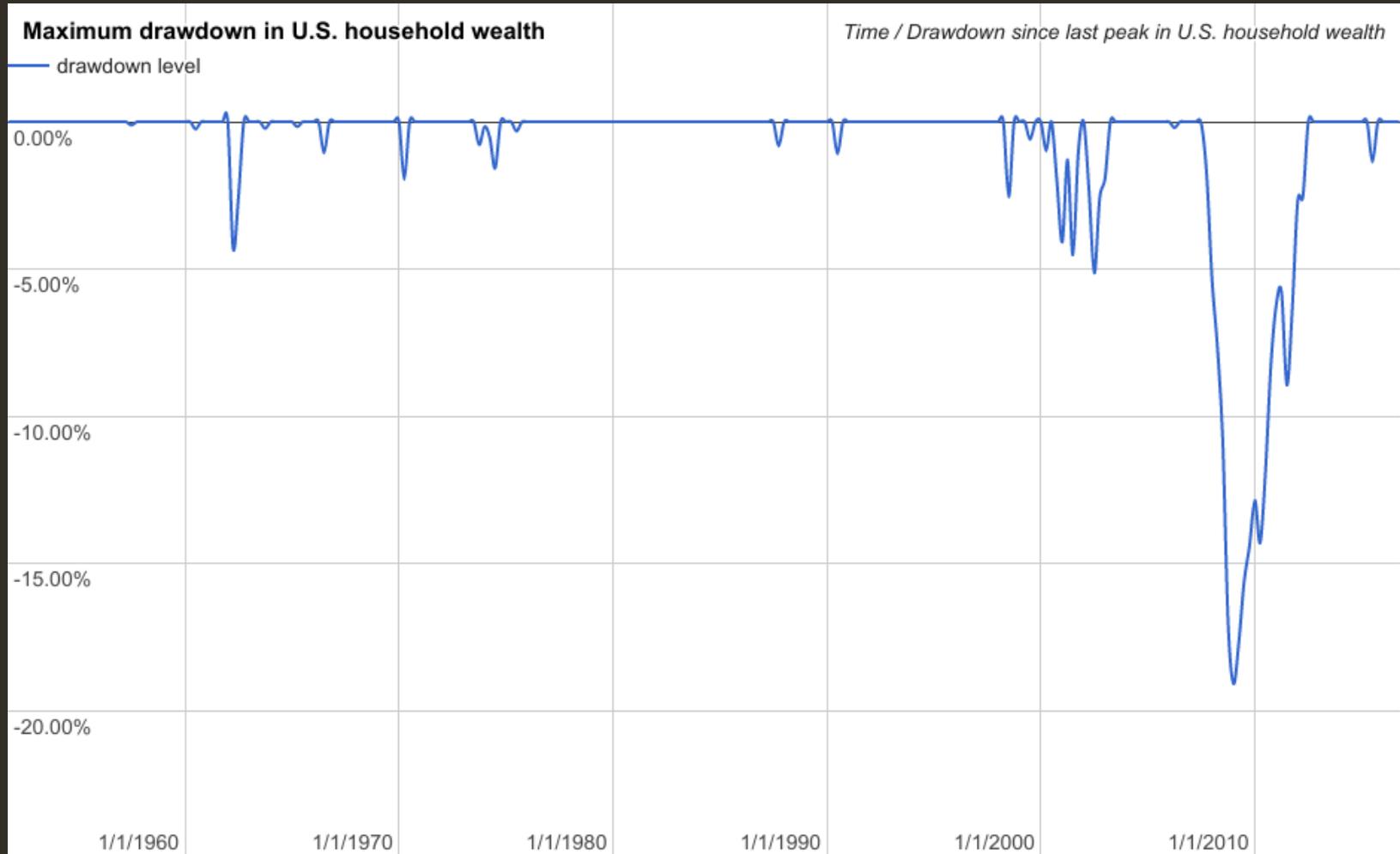
References

Here's proof the average U.S. household isn't the 'dumb money'
- Marketwatch

The Real Dumb Money: Retail Investors Have Outperformed
Hedge Funds By 300% - Zerohedge

... compare the returns for your current portfolio to the
benchmark for the class of investments you're considering -
Finra

US investors better than "smart money"

Trading strategy based on US investor allocations
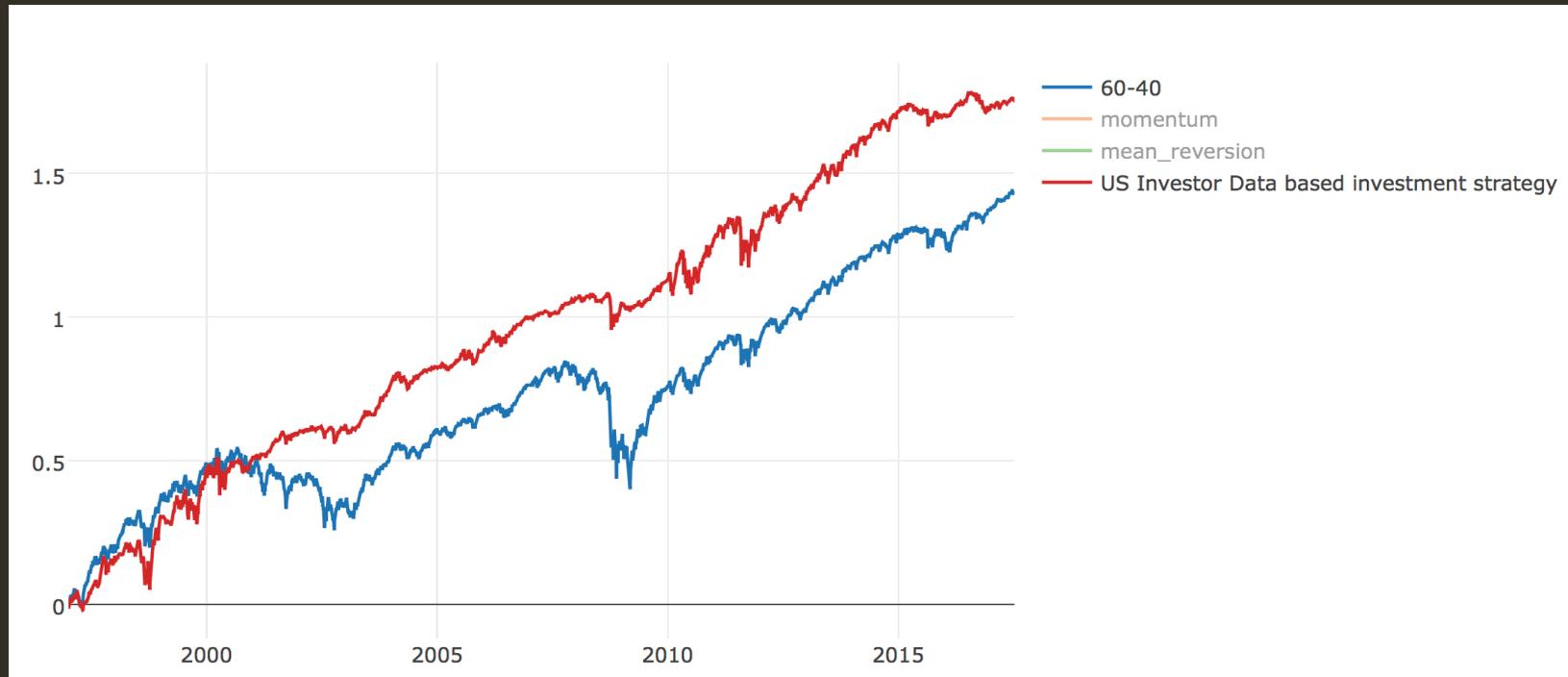
(Backtested) Gains of investing one dollar in each of these strategies

These backtested results are for illustrative purposes only. Backtested performance is not indicative of future results. The actual performance for

investments in these strategies could be different.

Towards a science of investing

" *In future, we should be investing with a trustworthy tool and not experts.*

The tool should look at every aspect of the data.

The tool should be affordable and efficient.

The tool should know what we have learned already."

- Benjamin Graham
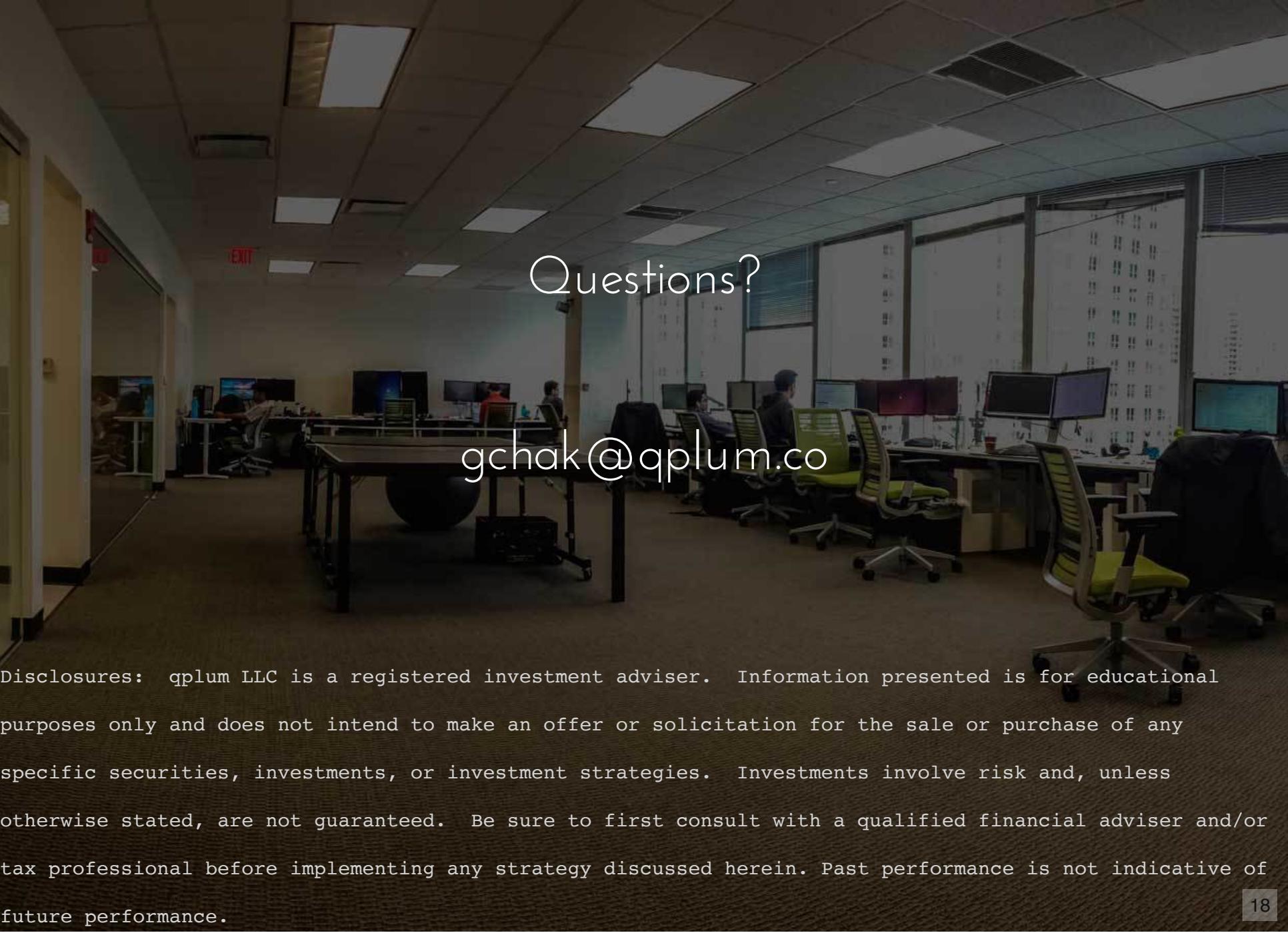
Questions?

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